DATE OUT: 8/JUN/1999

SUBJECT: PRODUCT CHEMISTRY REVIEW OF Manufacturing-Use Product[ ], End Use Product[x]
BARCODE No.: D255478; **EPA RECEIVED DATE:** 29/OCT/98; **EPA REG./File Symbol No.:** 3125-325
PRODUCT NAME: Sencor DF 75% Dry Flowable Herbicide ; **COMPANY NAME:** Bayer Corp. ; **Action Code:** 674 8-Month Response to Product Specific Data Call-In

FROM: Paul Horng, Ph. D., Chemist
Product Chemistry Team
PRB/SRRD (7508W)

Paul Horng

TO: Cynthia Williams, CRM
Product Reregistration Branch
PRB/SRRD (7508W)

INTRODUCTION:

The registrant, Bayer Corporation, submitted the product chemistry data in MRID # 447139-22; the CSF, a basic formulation dated 1/SEP/98; a draft label received by the Agency on 29/OCT/98; requesting FIFRA Section 4 reregistration of end-use product Sencor DF 75% Dry Flowable Herbicide, EPA Reg. No. 3125-325.

FINDINGS:

1. A Reregistration Eligibility Decision (RED), Case # 0181, was issued on August 13, 1998 for the Technical Grade Active Ingredient (TGAI) metribuzin. The generic data base supporting the reregistration of metribuzin has been reviewed and determined to be substantially complete.

2(a). Except for the data gaps noted in 2(b), the submitted data MRID # 447139-22 satisfy the product chemistry data requirements for Guideline Series 61, 62, and 63 (OPPTS Testing Guideline Series 830-1550 through 830-7950).

2(b). No data were provided for Guidelines 63-17 (830-6317, Storage Stability) and 63-20 (830-6320, Corrosion Characteristics). The data requirements are still outstanding.

3(a). Except for a minor revision required for the CSF as noted in 3(b), the submitted CSF, a basic formulation dated 1/SEP/98, is in compliance with the requirements of PR Notice 91-2. All ingredients claimed in the CSF have been cleared for use in pesticide formulation.

3(b). (1) The product name in box # 3 of the CSF should be changed from Sencor 75 DF Turf Herbicide to Sencor DF 75% Dry Flowable Herbicide. (2) EPA Product Manager/Team No. should be changed from Robert Taylor/25 to Jim Tompkins/25. (3) The Bulk Density in box # 7 of the CSF should be changed from 33-37 to 34.8 lb/cu.ft. (4) The upper limit and lower limit of the [redacted] in column # 14a and # 14b of the CSF far exceed the limit that is allowed by 40 CFR 158.175 and must be changed from [redacted] to [redacted] respectively.

4(a). Except for a minor revision required for the label as noted in 4(b), the ingredient statement complies with the requirements of PR Notices 91-2, 97-5, and 97-6. The physical and chemical property data show that no physical or chemical hazard is anticipated for the product. Therefore, the physical or chemical hazard statement currently on the label may be removed.

INERT INGREDIENT INFORMATION IS NOT INCLUDED

4(b). (1) A common name "Metribuzin"should be placed in front of the chemical name in the ingredient statement. (2) The storage and disposal statement should be placed in a box of solid line to increase its prominence. The revision of the label can be done after label review.

RECOMMENDATIONS:

Except for the data gaps as noted in Finding # 2(b), and a minor revision required for the CSF as noted in Finding # 3(b), the registrant has satisfied all product chemistry data requirements for reregistration of this subject product. Once the outstanding data have been submitted and satisfied, the Agency will have no objection to reregistration of the end-use product, Sencor DF 75% Dry Flowable Herbicide, EPA Reg. No. 3125-325.

REVIEW OF PRODUCT CHEMISTRY DATA:

PRODUCT NAME: Sencor DF 75% Dry Flowable Herbicide, EPA Reg. No. 3125-325.

Group A: Series 830-Product Identity, Composition, and Analysis (40 CFR 158.155, .160, .165, .170, .175, and .180).

830-1550 Product Identity and Composition
Refer to the CSF.

830-1600 Description of Beginning Materials Used to Produce the Product.
Refer to Confidential Appendix A.

830-1620 Description of Formulation Process.
Refer to Confidential Appendix A.

830-1650 Description of Formation of Impurities.
Refer to Confidential Appendix A.

830-1700 Preliminary Analysis
Refer to Confidential Appendix A.

830-1750 Certified Limits.
Refer to Confidential Appendix A.

830-1800 Enforcement of Analytical Method
Metribuzin in the product Sencor DF is analyzed with a gas chromatograph (GC) equipped with a Flame Ionization Detector (FID).
Instrument: Hewlett-Packard 5890 GC
Column: DB-225 coated with FSOT capillary column, 5 m x 0.53 mm ID x 1.0 um film.
Column temperature: 195°C.
Injection port temperature: 250°C.
Detector temperature: 300°C.
Carrier gas: He: flow 7.0 ml/min
Hydrogen: 30 ml/min.
Air: 240 ml/min.

Make up 25 ml/min.
Split ratio: 1: 10 ml/min.

Preparation of Internal Standard Solution:

1. Prepare 1.0% (v/v) of Di-n-butyl phathalate (DNBP) in methylene chloride. Pipet 5 ml of DNBP into a 500 ml volumetric flask. Dilute to volume with methylene chloride. Mix thoroughly.

Preparation of Analytical Standard Solution:

1. Weigh 0.10-0.12 ± 0.0001 g of Sencor analytical standard into 2 oz. bottle fitted with a polyseal cap.

Preparation of Sample Solution:

1. Weigh 0.12-0.15 ± 0.0001 g of sample into a 2 oz.bottle fitted with a polyseal cap.
2. Pipet 5 ml of the internal standard solution into each bottle of analytical standard solution and sample solution. Add 45 ml of methylene chloride into each bottle. Cap the bottles with Polyseal caps.
3. Shake the standard and sample solutions vigorously by hand for at least 15 seconds. Sonicate the flowable samples for at least 1 minute, then shake well by hand.
4. Filter the standard and sample solutions through separate 0.45 um porosity filters and collect the filtrates in separate 2-ml autoinjector vials.
5. Inject 1 ul of the standard and sample solutions in duplicate into the gas chromatograph.

Calculations:

$R = (I/S)$

$M = (A/B)$

$K = Ws \times P \times R$

$\text{Sencor } \% = (K \times M)/W$

$\overline{R}$ = mean peak area ratio of I and S

I = peak area of internal standard

S = peak area of analytical standard

$\overline{M}$ = mean peak area ratio of sample A and B

Ws = sample weight

P = percent chemical purity

Group B: Series 830-6302 through 830-7950 Physical/Chemical Properties (40 CFR 158.190). MRID: 447139-22.

Guideline Reference Number (GRN)/Title 830-	Value or Qualitative Description/Method Used Where Applicable and References	Comments
830-6302 Color	Tan.	A
830-6303 Physical State	Granular solid.	A
830-6304 Odor	Not required as per PR Notice 92-5.	NR
830-6314 Oxidation/Reduction	N/A, product contains neither oxidizing nor reducing agent.	N/A
830-6315 Flammability/Flash Point	N/A, product contains no combustible liquid.	N/A
830-6316 Explodability	N/A, product has no explosive characteristics on the basis of the chemical nature of the formulation ingredients.	N/A
830-6317 Storage Stability	Data were not provided.	Gap
830-7100 Viscosity	N/A, product is not a liquid.	N/A
830-6319 Miscibility	N/A, the product will not be diluted with petroleum distillate.	N/A
830-6320 Corrosion Characteristic	Data were not provided.	Gap
830-6321 Dielectric Breakdown Voltage	N/A, the product is not intended to use around electrical equipment.	N/A
830-7000 pH	pH 9-10 (10% aqueous dispersion).	A
830-7300 Density/Bulk Density	34.8 lbs/cu.ft.	A

A: Acceptable; N/A: Not Applicable

DER MRID. 44713922

Page 5 is not included in this copy.

Pages ___ through ___ are not included in this copy.

The material not included contains the following type of information:

✓ Identity of product inert ingredients.

_____ Identity of product inert impurities.

✓ Description of the product manufacturing process.

_____ Description of quality control procedures.

_____ Identity of the source of product ingredients.

_____ Sales or other commercial/financial information.

_____ A draft product label.

_____ The product confidential statement of formula.

_____ Information about a pending registration action.

_____ FIFRA registration data.

_____ The document is a duplicate of page(s) _____.

_____ The document is not responsive to the request.

The information not included is generally considered confidential by product registrants. If you have any questions, please contact the individual who prepared the response to your request.

Paul Horng: Central File (Reg. No. 3125-325.).
7508w:SRRD:PRB:CM2: p.h.: 8/JUN/99:703-308-8053:<3125-325>